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# ROPICAL FOREST NOTES

INSTITUTE OF TROPICAL FORESTRY \*

RIO PIEDRAS, PUERTO RICO

No. 6

## BAMBOO FOR FENCE POSTS

by

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Untreated common bamboo (Bambusa vulgaris) has been used for fence posts in Puerto Rico, but the service life averages only 1.3 years which limits its use. The initial strength of the bamboo is sufficient for most posts, but the weakening by decay and termites at the ground line soon makes the posts unserviceable.

In our experiments on the treatment of fence posts, we found that this bamboo can be treated with a five percent solution of pentachlorophenol in Diesel oil. For this, the nodes of the bamboo were knocked out with a pipe after the posts were cut to the desired length. This permitted faster drying and interior penetration of the preservative. Apparently very little preservative penetrates through the hard outer shell, and the treatment has to be from the interior of the culm. We usually left the node at the top of the post intact so that rain water would not accumulate in the posts when in use. We also bored  $1\frac{1}{4}$ -inch holes through the posts before treatment at places where the line wires would be fastened.

We treated bamboo posts by cold soaking and by the hot-and-cold bath method. Good penetration, as revealed by examination of cut sections was secured by both types of treatment but better treatment resulted from the hot-and-cold bath method. The average retention of preservative was 6.3 pounds per cubic foot for a five-day cold soak, and 7.9 pounds per cubic foot for the hot-and-cold bath treatment. The posts were set out for the determination of service life in April 1959, so we do not know from experience how long the posts will last. We expect, however, that the posts treated by cold soaking will last 5 to 8 years, while those treated by the hot-and-cold bath method will last 8 to 12 years. It should be understood, however, that this is an estimate, and actual service life data may differ from this estimate.

Bamboo posts have many advantages when treated. The bamboo is easily obtained, since it occurs along or near roads, it does not have to be peeled for treatment, and it will dry sufficiently for treatment in 4 to 10 weeks. The nodes are easily broken out with a pipe, and the posts are light in weight yet sufficiently strong. Also, preservative costs amount to only 2 to 3 cents per post as compared to 10 to 12 cents for 7-foot wooden posts when the preservative costs 35 cents a gallon. One disadvantage is that staples will split the bamboo, but the line wires can be fastened by galvanized wire running through the holes bored for that purpose.

Bamboo species other than B. vulgaris may also be treated and used for fence

\* Operated in cooperation with the University of Puerto Rico.

fence posts provided such species are sufficiently strong for the intended use.

Steps in the treatment of bamboo posts:

1. Cut mature culms that are at least two years old.
2. Cut culms in lengths for fence posts, usually 7 feet long. It is best if the top node is only 3 inches below the top of the post. Cut posts from lower two-thirds of the culm, since the upper part of the culm usually splits during seasoning.
3. Knock out all nodes but the top one with a pipe or iron bar.
4. Bore 1/4-inch holes through post just above top node, and then at 1-foot intervals, or at intervals you wish to place the line wires.
5. Pile posts on 8-inch concrete blocks for air drying, as green bamboo will not absorb the preservative. First, place two posts across each of two blocks, and then place 12 posts crosswise to these. Continue layers of 12 posts, each layer crosswise to the layer below. Season posts for 4 to 5 weeks in dry weather, and 8 to 10 weeks in wet weather.
6. Dip posts in the 5 percent pentachlorophenol solution for 3 minutes if powder post beetles attack the posts during drying to prevent further attack. It is good practice to make this dip just before piling for seasoning to avoid extra handling.
7. The posts can be treated when dry. This can be done by either cold soaking or by the hot-and-cold bath method.
  - A. Cold soaking. Submerge the posts for 5 days in 5 percent pentachlorophenol with Diesel oil. Drain the excess penta by slanting the posts over the treating tank.
  - B. Hot-and-cold bath. Submerge the posts for one hour in 5 percent pentachlorophenol heated to 200°F. Transfer the posts quickly to a cold solution of 5 percent pentachlorophenol. Leave submerged for 12 hours. Drain off excess penta after treatment.

NOTE

The enclosed mimeographed reports cover forest plantations studied since the publication of the Second Annual Report of the Section on Planting, Regional Committee on Forest Research, Latin American Forestry Commission, Food and Agriculture Organization United Nations, "Records of Forest Plantation Growth in Mexico, the West Indies, and Central and South America."

The Second Annual Report was published as a special supplement to Volume 21 of the Caribbean Forester. The Supplement was bound in loose-leaf form to permit the insertion of these individual plantation reports.

NOTA

Los informes mimeografiados que se incluyen cubren plantaciones forestales investigadas desde que se publicó el Segundo Informe Anual titulado "Datos de Crecimiento de Plantaciones Forestales en Mexico, Indias Occidentales y Centro y Sur America" por la Sección de Forestación, Comité Regional Sobre Investigación Forestal, Comisión Forestal Latinoamericana, Organización de las Naciones Unidas para la Agricultura y la Alimentación.

El Segundo Informe Anual se publicó como un suplemento especial al Volumen 21 del Caribbean Forester. El mismo se encuadernó en tal forma que permitiera la inserción de estos informes forestales.



SPECIES *Eucalyptus globulus*

ECOLOGICAL GROUP Temperate Moist

COUNTRY Chile

PLANTATION 264

## GROWTH

DOMINANTS &amp; CODOMINANTS

AGE : DBH cm : HEIGHT m  
9        20        29

STAND PER HECTARE

NO.TREES: BASAL AREA :VOLUME  
2170        28

## SITE

LAT. 37° 05'S            LONG. 73° 10'W            ELEV. 110

ANNUAL RAINFALL 1240            DRY MONTHS Nov. - March

AV. TEMPERATURE 13°            FROST July - August

PARENT ROCK shale            SOIL residual

TOPSOIL TEXTURE none            SUBSOIL TEXTURE clay

DEPTH 1 m.+            REACTION 5.0            DRAINAGE free

SOIL STATE severely degraded

TOPOGRAPHY 20% slope            ASPECT W

CONDITION AT PLANTING secondary forest

SEED ORIGIN Plantation nearby

## PLANTING

PREPARATION cleared            DATE 1952

SPACING 2 x 2            AREA 40            STOCK bareroot

TOOLS spade

CARE No thinning or pruning

REPRODUCTION None, seeds produced.

LOCATION Stand 3, Fundo Roble Huacho, 1 km SE of Lota, Concepción

COMMENTS Excellent Form

SOURCE Hector Lisboa, Sociedad Agrícola y Forestal Colcura,  
Lota, Chile

13 - 44

SPECIES *Eucalyptus globulus*

ECOLOGICAL GROUP Temperate Moist

COUNTRY Chile

PLANTATION 265

GROWTH

DOMINANTS & CODOMINANTS

AGE : DBH cm : HEIGHT m  
20 34 43

STAND PER HECTARE

NO. TREES: BASAL AREA : VOLUME  
2130 38

SITE

LAT. 37° 05'S

LONG. 73° 10'W

ELEV. 100

ANNUAL RAINFALL 1240

DRY MONTHS Nov. - March

AV. TEMPERATURE 13

FROST July - August

PARENT ROCK shale

SOIL residual

TOPSOIL TEXTURE clay

DEPTH 15 cm

SUBSOIL TEXTURE clay

DEPTH 1 m. +

REACTION 5.5

DRAINAGE free

SOIL STATE moderately degraded

TOPOGRAPHY 50% slope

ASPECT N

CONDITION AT PLANTING secondary forest

SEED ORIGIN plantation nearby

PLANTING

DATE 1941

SPACING 2 x 2

AREA 48.8

STOCK bareroot

TOOLS planting bar

SURVIVAL 92% at 20 years

REPRODUCTION None, seeds produced

LOCATION Lot A2, Villagrán, 5 km S. of Lota, Concepción

COMMENTS Mature for mine timbers, form excellent

SOURCE Hector Lisboa, Sociedad Agrícola y Forestal Colcura, Lota,

Chile

SPECIES *Eucalyptus globulus*

ECOLOGICAL GROUP Temperate moist

COUNTRY Chile

PLANTATION 266

## GROWTH

## DOMINANTS &amp; CODOMINANTS

AGE : DBH cm : HEIGHT m  
47 48 37STAND PER HECTARE  
NO. TREES: BASAL AREA : VOLUME  
260 44

## SITE

LAT. 37°05'S LONG. 73°10'W ELEV. 250

ANNUAL RAINFALL 1240 DRY MONTHS November-March

AV. TEMPERATURE 13 FROST July-August

PARENT ROCK Schist SOIL residual

TOPSOIL TEXTURE clay DEPTH 15 cm

SUBSOIL TEXTURE clay DEPTH 15 cm

REASON 5.0 DRAINAGE free

SOIL STATE little disturbed

TOPOGRAPHY lower slope, 70% ASPECT SW

CONDITION AT PLANTING secondary forest

SEED ORIGIN plantation nearby

## PLANTING

PREPARATION cleared DATE 1914

SPACING 2 x 2 AREA 3 STOCK bareroot

TOOLS shovel

REPRODUCTION Abundant

LOCATION Stand 3, Lomas del Ganado, 8 km SE of Lota,  
ConcepciónSOURCE Hector Lisboa, Sociedad Agrícola y Forestal Colcura,  
Lota, Chile

13 - 46

SPECIES *Eucalyptus globulus*

ECOLOGICAL GROUP Temperate Moist

COUNTRY Chile

PLANTATION 267

GROWTH

DOMINANTS & CODOMINANTS			STAND PER HECTARE	
AGE : DBH cm	: HEIGHT m		NO. TREES :	BASAL AREA : VOLUME
16	26	33	730	39

SITE

LAT. 37° 05' S LONG. 73° 10' W ELEV. 180

ANNUAL RAINFALL 1240 DRY MONTHS November - March

AV. TEMPERATURE 13 FROST July - August

PARENT ROCK Mica schist SOIL residual

TOPSOIL TEXTURE None SUBSOIL TEXTURE clay

DEPTH 50 cm REACTION 6.0 DRAINAGE free

SOIL STATE severely degraded

TOPOGRAPHY Upper slope, 30% ASPECT N

CONDITION AT PLANTING secondary forest

SEED ORIGIN plantation nearby

PLANTING

PREPARATION cleared DATE 1929

SPACING 2 x 2 AREA 10 STOCK bareroot

TOOLS shovel

REPRODUCTION abundant

LOCATION Cerro Alto, 6 km SE of Lota, Concepción

COMMENTS Coppice after cutting in 1945

SOURCE Hector Lisboa, Sociedad Agrícola y Forestal, Colcura,  
Lota, Chile

SPECIES *Eucalyptus grandis*

ECOLOGICAL GROUP Temperate Moist

COUNTRY Argentina

PLANTATION 283

## GROWTH

## DOMINANTS &amp; CODOMINANTS

AGE : DBH cm : HEIGHT m  
14 38 37STAND PER HECTARE  
NO. TREES: BASAL AREA : VOLUME  
980 55

## SITE

LAT. 31°20' S LONG. 58°00' W ELEV. 50

ANNUAL RAINFALL 1120 DRY MONTHS none

AV. TEMPERATURE 19 FROST May - August

PARENT ROCK granite SOIL alluvial

TOPSOIL TEXTURE fine sand DEPTH 50 cm

SUBSOIL TEXTURE sand DEPTH 1 m.+

REACTION 4.5 DRAINAGE free

SOIL STATE moderately degraded

TOPOGRAPHY level CONDITION AT PLANTING pasture

SEED ORIGIN plantation in Argentina

## PLANTING

PREPARATION plowed and disked DATE Oct., 1947

SPACING 3 x 3 AREA 0.2 STOCK potted

TOOLS shovel SURVIVAL 90% at 14 years

CARE Disked 3 times each of first 3 years

REPRODUCTION seed abundant

LOCATION Colonia Ayuy, 25 km N of Concordia, Entre Rios

COMMENTS Form excellent

SOURCE Raul Rossi, San Martin 122, Concordia, Argentina

13 - 48

SPECIES *Eucalyptus grandis*

ECOLOGICAL GROUP Temperate Humid

COUNTRY Argentina

PLANTATION 284

GROWTH

DOMINANTS & CODOMINANTS

STAND PER HECTARE

AGE : DBH cm : HEIGHT m

NO. TREES : BASAL AREA : VOLUME

6 25 21

1050 30

SITE

LAT. 31°20' S

LONG. 58°00' W

ELEV. 50

ANNUAL RAINFALL 1120

DRY MONTHS none

AV. TEMPERATURE 19

FROST May - August

PARENT ROCK granitic

SOIL alluvial

TOPSOIL TEXTURE sand

DEPTH 1 m. +

SUBSOIL TEXTURE sand

REACTION 5.5

DRAINAGE free

SOIL STATE little disturbed

TOPOGRAPHY level

CONDITION AT PLANTING pasture

SEED ORIGIN plantation in Argentina

PLANTING

PREPARATION plowed and disked

DATE December 1955

SPACING 3 x 3

AREA 5

STOCK potted

TOOLS shovel

SURVIVAL 95% at 6 years

CARE Disked 8 times per year for 2 years

REPRODUCTION seeds abundant

LOCATION Yuqueri, 12 km W of Concordia, Entre Rios

SOURCE Guillermo von Wernich, Concordia, Argentina

SPECIES *Eucalyptus saligna*

ECOLOGICAL GROUP Temperate Humid

COUNTRY Argentina

PLANTATION 285

## GROWTH

DOMINANTS &amp; CODOMINANTS

AGE : DBH cm : HEIGHT m  
8        24        25

STAND PER HECTARE

NO.TREES : BASAL AREA : VOLUME  
1050        25

## SITE

LAT. 27° 50'S            LONG. 56° 00' W            ELEV. 240

ANNUAL RAINFALL 1348            DRY MONTHS none

AV. TEMPERATURE 21°            FROST June - August

PARENT ROCK granite            SOIL residual

TOPSOIL TEXTURE clay            DEPTH 1 m.+

SUBSOIL TEXTURE clay            REACCION 5.0

DRAINAGE free            SOIL STATE moderately degraded

TOPOGRAPHY flat ridge            CONDITION AT PLANTING pasture

SEED ORIGIN plantation in Argentina

## PLANTING

PREPARATION plowed            DATE 1953

SPACING 3 x 3            AREA 4            STOCK potted

TOOLS shovel            SURVIVAL 95% at 8 years

REPRODUCTION seed produced

LOCATION 5 km S of San José, Corrientes

SOURCE Lamberto Golfari, Celulosa Argentina S.A. Diagonal

Norte 938, Buenos Aires, Argentina

13 - 50

SPECIES *Eucalyptus saligna*

ECOLOGICAL GROUP Temperate humid

COUNTRY Argentina

PLANTATION 286

GROWTH

DOMINANTS & CODOMINANTS

AGE : DBH cm : HEIGHT m  
23 38 43

STAND PER HECTARE

NO.TREES: BASAL AREA : VOLUME  
345 48

SITE

27° 40' S LONG. 55° 40' W ELEV. 320

ANNUAL RAINFALL 1708 DRY MONTHS none

AV. TEMPERATURE 20 FROST May - September

PARENT ROCK granitic SOIL residual

TOPSOIL TEXTURE clay DEPTH 1 m.+

REACTION 6.0 DRAINAGE free

SOIL STATE moderately degraded

TOPOGRAPHY 10% slope ASPECT W

CONDITION AT PLANTING secondary forest

SEED ORIGIN Brazil

PLANTING

PREPARATION cleared DATE 1938

SPACING 2 x 2 AREA 1 STOCK potted

TOOLS shovel

REPRODUCTION seed abundant

LOCATION Estación Forestal, 8 km SW of Leandro Alem, Misiones

COMMENTS Form good

SOURCE Ramón Narciso Gómez, Estación Forestal, Leandro Alem,

Misiones, Argentina

SPECIES *Eucalyptus microcorys*

ECOLOGICAL GROUP Temperate Humid

COUNTRY Argentina

PLANTATION 287

## GROWTH

DOMINANTS & CODOMINANTS			STAND PER HECTARE
AGE : DBH cm	: HEIGHT m.	NO. TREES: BASAL AREA :	VOLUME
23	40	35	560 42 32

## SITE

LAT.  $27^{\circ}40' S$  LONG.  $55^{\circ}40' W$  ELEV. 320

ANNUAL RAINFALL 1708 DRY MONTHS none

AV. TEMPERATURE 20 FROST May - September

PARENT ROCK granitic SOIL residual

TOPSOIL TEXTURE clay DEPTH 1 m. +

SUBSOIL texture clay REACTION 6.0

DRAINAGE free SOIL STATE moderately degraded

TOPOGRAPHY flat ridge

CONDITION AT PLANTING pasture

SEED ORIGIN Brazil

## PLANTING

DATE 1938 SPACING 2 x 2 AREA 1

STOCK potted TOOLS shovel

REPRODUCTION seeds produced

LOCATION Estación Forestal, 8 km SW of Leandro Alem, Misiones

SOURCE Ramón Narciso Gómez, Estación Forestal, Leandro Alem,  
Misiones, Argentina

13 - 52

SPECIES *Eucalyptus maculata*

ECOLOGICAL GROUP Temperate Humid

COUNTRY Argentina PLANTATION 288

GROWTH

DOMINANTS & CODOMINANTS			STAND PER HECTARE	
AGE : DBH cm	: HEIGHT m		NO.TREES:	BASAL AREA : VOLUME
23	41	34	280	37

SITE

lat. 27° 40' S LONG. 55° 40' W ELEV. 320

ANNUAL RAINFALL 1708 DRY MONTHS none

AV. TEMPERATURE 20 FROST May - September

PARENT ROCK granitic SOIL residual

TOPSOIL TEXTURE clay DEPTH 1 m.+

SUBSOIL TEXTURE clay REACTION 6.0

DRAINAGE free SOIL STATE moderately degraded

TOPOGRAPHY flat ridge

CONDITION AT PLANTING pasture

SEED ORIGIN Brazil

PLANTING

DATE 1938 SPACING 2 x 2 AREA 0.25

STOCK potted TOOLS shovel

REPRODUCTION seed produced

LOCATION Estación Forestal, 8 km SW of Leandro Alem, Misiones

COMMENTS Form excellent

SOURCE Ramón Narciso Gómez, Estación Forestal, Leandro Alem,  
Misiones, Argentina

SPECIES *Eucalyptus maculata*

ECOLOGICAL GROUP Temperate Humid

COUNTRY Argentina

PLANTATION 289

## GROWTH

DOMINANTS & CODOMINANTS			STAND PER HECTARE	
AGE : DBH cm	HEIGHT m		NO. TREES:	BASAL AREA : VOLUME
5	21	21	1130	21

## SITE

LAT. 26° 30' S LONG. 54° 40' W ELEV. 280

ANNUAL RAINFALL 1733 DRY MONTHS none

AV. TEMPERATURE 20 FROST May - September

PARENT ROCK basalt SOIL residual

TOPSOIL TEXTURE none SUBSOIL TEXTURE clay

DEPTH 1 m.+ REACTION 6.5 DRAINAGE free

SOIL STATE little disturbed TOPOGRAPHY 5% slope

ASPECT NE CONDITION AT PLANTING virgin forest

SEED ORIGIN Brazil

## PLANTING

PREPARATION cleared DATE 1956

SPACING 2 x 2 AREA 0.1 STOCK potted

TCOLS shovel SURVIVAL 45% at 5 years

REPRODUCTION seeds produced

LOCATION Centro Forestal, Puerto Piray, Misiones

SOURCE Hugo Sartori, Celulosa Argentina, S.A. Puerto Piray,  
Misiones, Argentina

13 - 54

SPECIES *Eucalyptus botryoides*

ECOLOGICAL GROUP Temperate Humid

COUNTRY Argentina

PLANTATION 290

GROWTH

DOMINANTS & CODOMINANTS			STAND PER HECTARE	
AGE : DBH cm	: HEIGHT m		NO.TREES: BASAL AREA :	VOLUME
5	21	25	1630	26

SITE

LAT. 26° 30' S LONG. 54° 40' W ELEV. 280

ANNUAL RAINFALL 1733 DRY MONTHS none

AV. TEMPERATURE 20 FROST May - September

PARENT ROCK basalt SOIL residual

TOPSOIL TEXTURE none SUBSOIL TEXTURE clay

DEPTH 1 m.+ REACTION 6.5 DRAINAGE free

SOIL STATE little disturbed TOPOGRAPHY 5% slope

ASPECT NE CONDITION AT PLANTING virgin forest

SEED ORIGIN Brazil

PLANTING

PREPARATION cleared DATE 1956 SPACING 2 x 2

AREA 0.1 STOCK potted TOOLS shovel

SURVIVAL 65% at 5 years

REPRODUCTION seeds produced

LOCATION Centro Forestal, Puerto Piray, Misiones

SOURCE Hugo Sartori, Celulosa Argentina, S.A. Puerto Piray,  
Misiones, Argentina

SPECIES *Eucalyptus propinqua*

ECOLOGICAL GROUP Temperate Humid

COUNTRY Argentina

PLANTATION 291

## GROWTH

## DOMINANTS &amp; CODOMINANTS

AGE : DBH cm : HEIGHT m  
5      17      24

## STAND PER HECTARE

NO.TREES : BASAL AREA : VOLUME  
2000      29

## SITE

LAT. 26° 30' S      LONG. 54° 40' W      ELEV. 280

ANNUAL RAINFALL 1733      DRY MONTHS none

AV. TEMPERATURE 20      FROST May - September

PARENT ROCK basalt      SOIL residual

TOPSOIL TEXTURE none      SUBSOIL TEXTURE clay

DEPTH 1 m.+      REACTION 6.5      DRAINAGE free

SOIL STATE little disturbed

TOPOGRAPHY 5% slope      ASPECT NE

CONDITION AT PLANTING virgin forest

SEED ORIGIN Brazil

## PLANTING

PREPARATION cleared      DATE 1956

SPACING 2 x 2      AREA 0.1      STOCK potted

TOOLS shovel      SURVIVAL 80% at 5 years

REPRODUCTION seeds produced

LOCATION Centro Forestal, Puerto Piray, Misiones

SOURCE Hugo Sartori, Celulosa Argentina S.A. Puerto Piray

Misiones, Argentina

13 - 56

SPECIES *Eucalyptus paniculata*

ECOLOGICAL GROUP Temperate Humid

COUNTRY Argentina

PLANTATION 292

GROWTH

DOMINANTS & CODOMINANTS			STAND PER HECTARE	
AGE : DBH cm	HEIGHT m		NO. TREES:	BASAL AREA : VOLUME
5	14	18	2400	22

SITE

LAT. 26° 30' S LONG. 54° 40' W ELEV. 280

ANNUAL RAINFALL 1733 DRY MONTHS none

AV. TEMPERATURE 20 FROST May - September

PARENT ROCK basalt SOIL residual

TOPSOIL TEXTURE none SUBSOIL TEXTURE clay

DEPTH 1 m. + REACTION 6.5 DRAINAGE free

SOIL STATE little disturbed TOPOGRAPHY 5% slope

ASPECT NE CONDITION AT PLANTING virgin forest

SEED ORIGIN Brazil

PLANTING

PREPARATION cleared DATE 1956 SPACING 2 x 2

AREA 0.1 STOCK potted TOOLS shovel

SURVIVAL 95% at 5 years

REPRODUCTION seeds produced

LOCATION Centro Forestal, Puerto Piray, Misiones

SOURCE Hugo Sartori, Celulosa Argentina, S.A. Puerto Piray,  
Misiones, Argentina

SPECIES *Eucalyptus alba*

ECOLOGICAL GROUP Temperate humid

COUNTRY Argentina

PLANTATION 293

GROWTH

DOMINANTS & CODOMINANTS

STAND PER HECTARE

AGE : DBH cm : HEIGHT m

NO. TREES: BASAL AREA : VOLUME

5 23 27

1630 32

SITE

LAT. 26° 30' S

LONG. 54° 40' W

ELEV. 280

ANNUAL RAINFALL 1733

DRY MONTHS none

AV. TEMPERATURE 20

FROST May - September

PARENT ROCK basalt

SOIL residual

TOPSOIL TEXTURE none

SUBSOIL TEXTURE clay

DEPTH 1 m.+

REACTION 6.5

DRAINAGE free

SOIL STATE little disturbed

TOPOGRAPHY 5% slope

ASPECT NE

CONDITION AT PLANTING virgin forest

SEED ORIGIN Brazil

PLANTING

PREPARATION cleared

DATE 1956

SPACING 2 x 2

AREA 0.1

STOCK potted

TOOLS shovel

SURVIVAL 65% at 5 years

REPRODUCTION seeds produced

LOCATION Centro Forestal, Puerto Piray, Misiones

COMMENTS Good form

SOURCE Hugo Sartori, Celulosa Argentina, S.A. Puerto Piray,

Misiones, Argentina



1022912878

13 - 58

SPECIES *Eucalyptus rufa*

ECOLOGICAL GROUP Temperate humid

COUNTRY Argentina

PLANTATION 294

## GROWTH

DOMINANTS & CODOMINANTS			STAND PER HECTARE	
AGE : DBH cm	: HEIGHT m		NO. TREES:	BASAL AREA : VOLUME
5	23	24	1200	20

## SITE

LAT. 26° 30' S LONG. 54° 40' W ELEV. 280

ANNUAL RAINFALL 1733 DRY MONTHS none

AV. TEMPERATURE 20 FROST May - September

PARENT ROCK basalt SOIL residual

TOPSOIL TEXTURE none SUBSOIL TEXTURE clay

DEPTH 1 m.+ REACTION 6.5 DRAINAGE free

SOIL STATE little disturbed TOPOGRAPHY 5% slope

ASPECT NE CONDITION AT PLANTING virgin forest

SEED ORIGIN Brazil

## PLANTING

PREPARATION cleared DATE 1956 SPACING 2 x 2

AREA 0.1 STOCK potted TOOLS shovel

SURVIVAL 50% at 5 years

REPRODUCTION seeds produced

LOCATION Centro Forestal, Puerto Piray, Misiones

COMMENTS form fair

SOURCE Hugo Sartori, Celulosa Argentina, S.A., Puerto Piray,  
Misiones, Argentina